

1 ABSTRACT

2
3 Location aware handheld portable computing devices, methods of operating
4 the same, and computer architectures are described. In one described
5 embodiment, a handheld portable computing device determines its location. The
6 device can then acquire digital data that enables a user of the device to interact
7 with a location environment. The digital data can comprise different types of data
8 that permit environmental interaction. One type of data comprises one or more
9 applets that can be loaded and executed by the device. Other types of data include
10 code download pointers such as URLs that can point to Internet-accessible
11 locations from which applets can be obtained. The device can include an applet
12 cache that can maintain one or more applets for future use on the device. When a
13 device location changes, the device can flush or otherwise empty the cache of
14 applets that are no longer needed. In one particular embodiment, the device
15 determines its location by accessing one or more hierarchical tree structures each of
16 which comprising multiple nodes that represent physical or logical locations. The
17 device, or software code that is executing on the device, can then traverse at least
18 one node on the one or more hierarchical tree structures to ascertain a device
19 location.
20
21
22
23
24
25